CLAIM AMENDMENTS

1. *(Currently amended)* A method for preparing cells for ~~therapeutic use~~ use in regenerative medicine, comprising:

   a) differentiating human pluripotent stem (hPS) cells into a first cell population; and

   b) differentiating human pluripotent stem (hPS) cells into a second cell population;

   wherein the first cell population is MHC compatible with the second cell population, and whereupon administration of the first population to ~~an individual~~ subject renders the ~~individual~~ subject immunotolerant to the second cell population.

2. *(Original)* The method of claim 1, wherein the first cell population and the second cell population are differentiated from the same hPS cells or their progeny.

3. *(Original)* The method of claim 1, wherein the first cell population predominantly comprises mesoderm cells.

4. *(Original)* The method of claim 1, wherein the first cell population has characteristics of hematopoietic progenitor cells, blood leukocytes, leukocyte precursor cells, macrophage-like cells, dendritic cells, or mesenchymal stem cells.

5. *(Previously presented)* The method of claim 1, wherein the first cell population expresses one or more of the following markers: CD34, T-cell receptor, HLA Class II, CMRF-44, CMRF-56, DEC-205, S100, CD44, CD90, or CTLA-4.

6. *(Currently amended)* A method for preparing a first cell population that renders ~~an individual~~ a subject to whom it is administered immunotolerant to a second cell population, comprising differentiating human pluripotent stem (hPS) cells into a mixed cell population, and enriching from the mixed population cells that express CD34, T-cell receptor, HLA Class II, CMRF-44, CMRF-56, DEC-205, S100, CD44, CD90, or CTLA-4.

7. *(Original)* The method of claim 1, wherein the second cell population comprises one of the following cell types or their lineage-restricted precursors: hepatocytes, neurons, oligodendrocytes, astrocytes, cardiomyocytes, or osteogenic cells.

8. *(Original)* A combination of pharmaceutical compounds, comprising in separate containers:

a) a first cell population that has been differentiated from human pluripotent stem (hPS) cells into a phenotype that renders a subject to whom it is administered immunotolerant to a second cell population; and

b) the second cell population that is MHC compatible with the first cell population.

9. *(Original)* The pharmaceutical compounds of claim 8, wherein the first cell population and the second cell population are differentiated from the same hPS cell line.

10. *(Original)* The pharmaceutical compounds of claim 8, wherein the first cell population predominantly comprises mesoderm cells.

11. *(Original)* The pharmaceutical compounds of claim 8, wherein the first cell population has characteristics of hematopoietic progenitor cells, blood leukocytes, leukocyte precursor cells, macrophage-like cells, dendritic cells, or mesenchymal stem cells.

12. *(Previously presented)* The pharmaceutical compounds of claim 8, wherein the first cell population expresses one or more of the following markers: CD34, T-cell receptor, HLA Class II, CMRF-44, CMRF-56, DEC-205, S100, CD44, CD90, or CTLA-4.

13. *(Original)* The pharmaceutical compounds of claim 8, wherein the second cell population comprises one of the following cell types or their lineage-restricted precursors: hepatocytes, neurons, oligodendrocytes, astrocytes, cardiomyocytes, or osteogenic cells.

14. *(Currently amended)* A method for reconstituting cellular function in ~~an individual~~ a subject, comprising administering to the ~~individual~~ subject a first cell population and a second cell population, both differentiated from human pluripotent stem (hPS) cells, wherein the first cell population is MHC compatible with the second cell population,

whereupon administration of the first cell population renders the ~~individual~~ subject immunotolerant to the second cell population; and

whereupon administration of the second cell population reconstitutes the cellular function.

15. *(Previously presented)* The method of claim 14, wherein the phenotype of the first cell population expresses one or more of the following markers: CD34, T-cell receptor, HLA Class II, CMRF-44, CMRF-56, DEC-205, S100, CD44, CD90, or CTLA-4.

16. *(Original)* The method of claim 14, wherein the first cell population is administered to the circulation.

17. *(Currently amended)* The method of claim 14, wherein the cellular function that is reconstituted in the ~~individual~~ subject is the function of hepatocytes, neurons, oligodendrocytes, astrocytes, cardiomyocytes, or osteogenic cells.

18. *(Original)* The method of claim 14, wherein administration of the second cell population occurs at least 2 weeks after administration of the first cell population.

19. *(Original)* The method of claim 14, wherein the first cell population and the second cell population are differentiated from the same hPS cells or their progeny.

20. *(Currently amended)* A method of preparing ~~an individual~~ a subject for therapy to reconstitute their cellular function, comprising administering to the ~~individual~~ subject a first cell population differentiated from human pluripotent stem (hPS) cells, thereby rendering the ~~individual~~ subject immunotolerant to a second cell population also differentiated from hPS cells that is MHC compatible with the first cell population, wherein the therapy comprises administering to the ~~individual~~ subject the second cell population, thereby reconstituting the cellular function in the ~~individual~~ subject.